Research and Development Classification Process
Status Report

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EXECUTIVE SUMMARY

The Research and Development Classification Process (RDCP) was started in the summer of 2001 to ensure that covered employees have accurate and properly classified position descriptions. The covered employees are those for whom stature and contributions figure heavily into the scoring of the classification results. These positions are referred to as "person-in-the-job" positions. Peer panels are used to determine the appropriate classification using Office of Personnel Management classification guides. The process can result in classifications higher than the employee's current grade level and thus a promotion occurs.

This report describes the process and results for the first four sessions. The RDCP has been used to review 283 out of 743 eligible R&T employees in four sessions conducted from July 2001 through September 2002.

In addition to the 283 employees reviewed, up to 56 branch heads and 216 panel members have participated. The process does require some time, the average is between 32-62 hours, for all participants: branch heads, reviewees, and panel members.

For all four sessions there has been a promotion rate of approximately 55% based on all the people reviewed and has resulted in a total of 156 promotions, including resolution of appeals and desk audits. Of these, 113 were promoted to GS-14 and 43 to GS-15 grade levels, or 63% of the GS-13s considered were promoted while 52% of the GS-14s considered were promoted. There has been no statistical difference in results by race, Competency, peer group, or session in terms of grade change/promotion. Males and females have been promoted in proportion to the RDCP population.

Results from surveys conducted at the end of each session indicate improved ratings over the four sessions. In addition, positive comments were received from the recent Center survey about RDCP.

However, budget availability drives the rate of the process and is critical to the Center's ability to keep commitments to the covered employees for timely reviews. The original plan was to review all eligible employees within two years during nine sessions or quarters. But, primarily due to budget issues, along with some other changes, the schedules have stretched out so that the ninth session will not be started until the end of 2004, a year longer than originally planned. For example, the start of the sixth session was delayed by six weeks to wait for confirmation of the budget allocation for the remainder of FY03. This delay will slip the later sessions to some degree.

Monitoring of the process will continue and improvements will be made where possible. The RDCP Manager and Advisory Committee recommend that firm budget allocations be made early in each fiscal year to enable timely reviews.

DESCRIPTION OF RDCP

The Research and Development Classification Process (RDCP) is a process to ensure that all covered employees are properly classified according to OPM standards. This means that they have the appropriate grade level for their (updated and accurate) position descriptions. The RDCP provides review of researcher positions on a cyclical basis to assure classification accuracy is maintained.

The RDCP was created so that there would be a classification system that is clear and understandable to employees and managers, be consistent across the Competencies, and provide a published process and grade level criteria. This was partly in response to a Center survey indicating lack of understanding of classification systems at the Center. The system needed to be fair to both "researchers" and "development engineers." Modeled after similar processes long used by some other agencies, LaRC developed the RDCP. Covered employees are those whose jobs are considered person-in-the-job positions for which the individual's stature and impact of contributions weigh heavily in the final determination of the grade level. Management ultimately has the responsibility to ensure that this is accomplished; however, this process was designed to provide opportunity for maximum employee participation in the process. The RDCP uses peer groups to apply criteria specified by the Office of Personnel Management (OPM) classification guides for these positions and are delegated authority to do so by the Office of Human Resources.

The RDCP includes Aerospace Technologist jobs classified under the Office of Personnel Management (OPM) Research Grade Evaluation Guide (RGEG) and the Equipment Development Grade Evaluation Guide (EDGEG), grades GS-13 through GS-15. (Those not covered include supervisors, technical staff, other individuals on the Table of Position Management, or individuals whose job fits classification guides other than the RGEG or EDGEG.) Positions are classified based on the factors identified in these guides and are considered to be person-in-the-job positions. That is, the individual's expertise and accomplishments are factored into the position classification.

A peer-review process is the process OPM recommends be used for these types of jobs to determine the person's stature and impact of contributions because the peers, rather than managers or OHR classification specialists alone, would better understand the relevance of the contributions and stature in the field. In addition, in part by having the RDCP, LaRC does not have controls beyond budget constraints for the approximately 750 RDCP covered positions. The philosophy is that people have the stature and experience they have and that cannot be taken away to control grade level. Therefore, we should pay people for their appropriate grade. Panels composed of peer group members decide by consensus the recommended classifications for each of the covered positions, with Center-level management and Human Resources oversight. Managers are still very much involved. Managers decide to which peer groups employees belong. They are responsible for ensuring the accuracy of the position description and the employee's package. The branch head can use the criteria provided by the OPM guides and feedback from the RDCP panels as considerations when making employee job assignments or for

use in career development. The RDCP does not in any way replace performance reviews so that managers still perform those reviews. Managers recommend employees for early RDCP reviews and provide feedback to the RDCP manager about the RDCP. Thus the employee's management is involved in the entire classification process rather than only at the front end. Similarly, classification decisions are made by peers with the ability to make an accurate evaluation of stature and impact rather than high-level managers who may have neither the time nor technical expertise across the total spectrum of Center technical disciplines to perform this function. The RDCP manager works with an advisory committee to improve the quality of the RDCP and meets with them monthly.

The RDCP uses peer panels to evaluate the individual's expertise and accomplishments by applying the classification guides through a consensus decision-making process of peer scientists and engineers. These peers, acting as subject matter experts, identify impact of work performed, scope of assignments, and contributions to the field that lead to consistent and fair classification determinations. RDCP panel members are non-supervisory Langley employees. Peer panels have been delegated authority to classify positions based on OPM RGEG and EDGEG guides and to determine both the propriety of coverage by the specific guide or standard identified and the appropriate grade level for positions reviewed. The panels arrive at consensus decisions for each person reviewed. The Office of Human Resources (OHR) Representative provides technical and administrative assistance throughout the process. The RDCP relies on the active involvement of employees and management in each step of the process to ensure that required actions are met and that appropriate decisions are made. (Details about the RDCP can be found at this website: http://ohr.larc.nasa.gov/RDCP.html.)

Because a complete R&T-wide review of these positions had not been conducted for these positions for some time, an accelerated review cycle was established in order to get everyone reviewed the first time as quickly as possible, within two or three years. Thereafter, a regular review cycle of about every four years per employee is expected. Nine sessions were organized for the accelerated review cycle. Employees covered under RDCP at the time of implementation were assigned to an appropriate peer group as determined by their respective Competency Director and Branch Head. Then, each employee was randomly assigned to one of the nine sessions, based on grade so that the resulting distribution within each session approximately matched the distribution of grades of all the relevant employees. The dates for these sessions are in Table 1. The shaded areas shown in Figure 1 indicate in which sessions the respective peer groups are being reviewed. Currently, there are twelve peer groups with either eight or nine peer groups being reviewed each session.

This paper presents the status of the RDCP through the first four sessions, including the results and subsequent changes to the process.

Table 1. Schedule of Past and Future RDCP Sessions
(* Tentative dates subject to change)

Session 1 (01-1)
Employees notified for review July 15, 2001
Reports released September 30, 2001

Session 2 (01-2)
Employees notified for review September 5, 2001
Reports released December 23, 2001

Session 3 (02-1)
Employees notified for review December 21, 2001
Reports released June 2, 2002

Session 4 (02-2)
Employees notified for review May 16, 2002
Reports released September 8, 2002

Session 5 (02-3)
Employees notified for review September 27, 2002
Reports released March 4, 2003

Session 6 (03-1)
Employees notified for review April 15, 2003
Packages due OHR and RDCP manager May 19, 2003
Panels prepare May 21-June 20, 2003
Panels meet June 23-July 25, 2003
Reports released by August 1, 2003

Session 7 (03-2)*
Employees notified for review August 1, 2003
Packages due OHR and RDCP manager September 15, 2003
Panels prepare September 17-October 17, 2003
Panels meet October 20 - November 21, 2003
Reports released by December 5, 2003

Session 8 (03-3)*
Employees notified for review December 9, 2003
Packages due OHR and RDCP manager January 22, 2004
Panels prepare January 26-February 22, 2004
Panels meet February 23 – March 26, 2004
Reports released April 9, 2004

Session 9 (04-1)*
Employees notified for review April 16, 2004
Packages due OHR and RDCP manager June 7, 2004
Panels prepare June 10-July 11, 2004
Panels meet July 12 – August 20, 2004
Reports released by September 10, 20

Peer Group	Session Being Reviewed								
	1	2	3	4	5	6	7	8	9
Aero & Acoustics	X	X	X	X	X	X	X	X	X
Aerospace Sys	X		X	X	X	X	X	X	
Aerothermo		X			X	X		X	X
Atmospheric Science	X	X	X	X	X	X	X		X
Computational Methods	X		X			X	X		
Computer Sci		X		X			X		
Crew Systems		X	X		X		X	X	X
Dynamics & Ctrls	X	X	X		X	X		X	X
Flight Instrumentation	X	X	X	X	X				X
Research Systems	X	X	X	X	X	X	X	X	X
Sensors, Instrum & Meas	X	X	X	X		X	X	X	
Structures & Mtls	X		X	X		X	X		X

Figure 1. Peer Groups currently assigned to sessions for review.

RDCP EMPLOYEE POPULATION

There were approximately 795 employees (GS-13 through GS-15s) initially included in the randomized assignment of RDCP review sessions. Of these, at the time of session assignment, 457 were GS-13s, 223 were GS-14s, and 115 were currently GS-15s. For various reasons, the number of people determined to be covered by the RDCP was reduced. As of December 20, 2002, there were 743 employees under the RDCP, although 25 of these employees indicated that they intend to retire within the next two years and so are exempt from review. Of these 743 employees at the time of review session assignment, 443 were originally GS-13s, 202 were GS-14s, and 98 were GS-15s. The average time-in-grade at the time of session assignment for each grade level was 6.2, 7.0, and 8.9 years, respectively. However, the ranges for time-in-grade for each grade level were 1 to 34 years for GS-13s, and 1 to 40 years for the GS-14s and GS-15s. This similar range helps explain why there is no statistically significant correlation between the original grade level and time-in-grade. Table 2 shows the distribution by grade level across all the Peer Groups including the mean, median, and mode for time-in-grade.

Table 2. Initial Distribution of Grade Level across all Peer Groups.

ORIGINAL GRADE LEVEL			ORIGINAL TIME-IN-GRADE (years)			
	Count	Percentage	Mean	Std. Dev.	Median	Mode
GS-13	443	60%	6.2	5.5	5.4	5.4
GS-14	201	27%	7.0	6.0	5.3	3.4
GS-15	99	13%	8.9	7.1	8.3	3.4
Total	743	100%	7.4	6.2	6.3	4.1

Table 3 shows the initial grade level distribution and time-in-grade for each peer group. Note that one of the peer groups, Flight Instrumentation Research, did not have any GS-15s at the start of RDCP. And, Computer Science only had one GS-15. Not surprisingly, all peer groups had more GS-13s than any other grade level, although the percentages between the grade levels differed somewhat by peer group. For example, after the two peer groups just mentioned, Crew Systems had the lowest percentage (7%) of GS-15s while Atmospheric Science had the highest percentage (30%) within their respective peer groups.

Table 3. Initial Distribution of Grade Level and Time-in-Grade by Peer Group

REVIEWEE PEER GROUP	ORIGINAL GRADE LEVEL			TIME-IN-GRADE (years)	
		Count	Percentage	Mean	Median
Aero & Acoustics	GS-13	49	55.7%	6.8	4.7
	GS-14	26	29.5%	7.3	6.8
	GS-15	13	14.8%	9.6	9.7
	Total	88	100.0%	7.9	7.1
Aerospace Systems Analysis	GS-13	45	64.3%	6.4	5.4
	GS-14	18	25.7%	5.9	5.3
	GS-15	7	10.0%	9.5	2.3
	Total	70	100.0%	7.3	4.3
Aerothermo	GS-13	20	55.6%	5.7	5.4
	GS-14	13	36.1%	9.9	5.3
	GS-15	3	8.3%	7.3	6.3
	Total	36	100.0%	7.6	5.7
Atmospheric Science	GS-13	33	45.9%	5.0	4.3
	GS-14	17	23.6%	6.2	5.3
	GS-15	22	30.5%	8.4	9.3
	Total	72	100.0%	6.5	6.3
Computational Methods	GS-13	23	51.1%	3.7	2.5
	GS-14	13	28.8%	4.9	3.4
	GS-15	9	20.0%	10.6	8.3
	Total	45	99.9%	6.4	4.7
Computer Sci & Engineering	GS-13	15	55.5%	6.8	6.9
	GS-14	11	40.7%	9.8	9.3
	GS-15	1	3.7%	na	na
	Total	27	99.9%	8.3	8.1
Crew Systems	GS-13	37	67.3%	5.4	5.2
	GS-14	14	25.5%	5.6	5.3
	GS-15	4	7.2%	7.0	8.2
	Total	55	100.0%	6.0	6.2
Dynamics & Controls	GS-13	35	56.4%	6.6	5.4
	GS-14	20	32.3%	4.4	3.4
	GS-15	7	11.3%	9.0	8.3
	Total	62	100.0%	6.7	5.7
Flight Instrumentation Research	GS-13	31	70.5%	7.0	5.4
	GS-14	13	29.5%	12.3	11.5
	GS-15	0	0.0%	na	na
	Total	44	100.0%	9.7	8.5
Research Systems	GS-13	91	68.4%	6.8	6.4
	GS-14	28	21.1%	7.1	6.7
	GS-15	14	10.5%	7.1	7.7
	Total	133	100.0%	7.0	6.9
Sensors, Instrumentation & Measurement	GS-13	32	61.6%	6.7	4.3
	GS-14	10	19.2%	7.4	7.3
	GS-15	10	19.2%	8.6	8.8
	Total	52	100.0%	7.6	6.8
Structural Mech & Adv Mtls	GS-13	32	54.2%	4.9	4.9
	GS-14	18	30.5%	6.2	4.9
	GS-15	9	15.3%	11.6	11.3
	Total	59	100.0%	7.6	7.0

Gender and race breakout: Out of the total 743 employees, 85 % were males and 15 % females, and 84% were White and 16 % are not White. The breakout of the RDCP population by gender and race is given in Table 4.

Table 4. RDCP Population distribution by Gender and Race.

Gender	Race		Total Gender
	White	Non-White	
Female	12.9%	2.2%	15.1%
Male	70.7%	14.3%	84.9%
Total Race	83.6%	16.4%	100.0%

More details about the breakdown of the non-White portion of the population are that 8% were Asian, 5 % were Black, 3 % were Hispanic, and less than 1 % were Native American. Of the non-White males, 9 % were Asian, 4 % were Black, 3 % were Hispanic, and less than 1 % were Native American. Of the non-White females, 5 % were Asian, 7 % were Black, 3 % were Hispanic, and 0 % was Native American. This distribution is illustrated in Figure 1. These slight differences in the distribution of race between the two genders are not statistically significant.

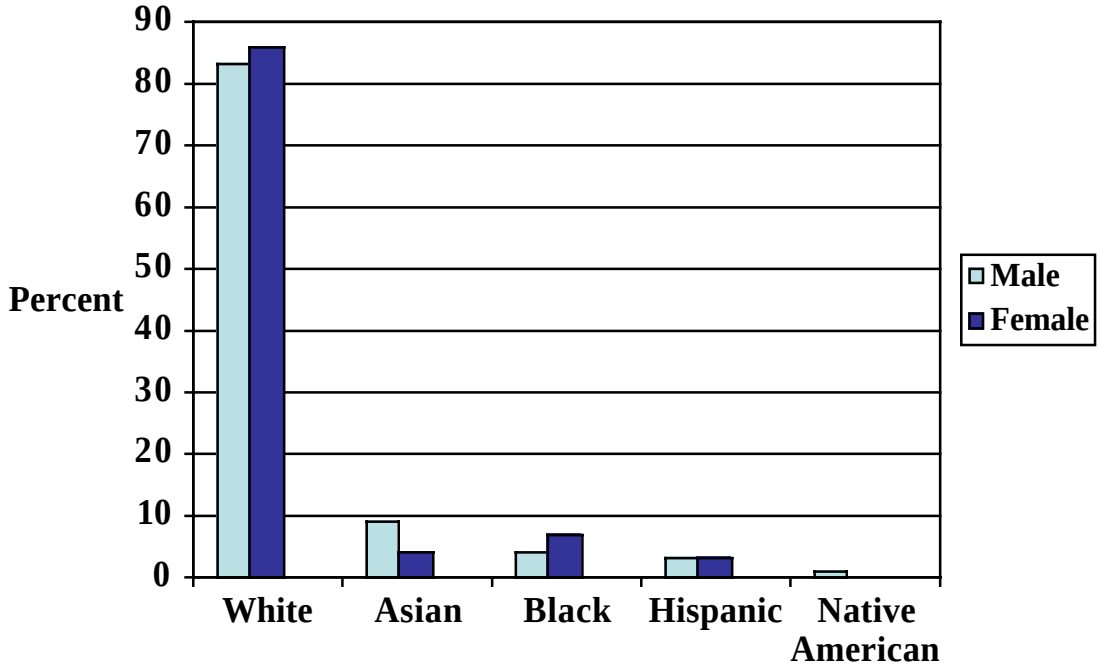


Figure 1. Distribution of RDCP participants by race and gender.

The distribution of minorities and gender for each Peer Group is shown in Table A-1 in Appendix A. Some Peer Groups had different percentages than the overall percentages, but with some exceptions, the trends were similar.

The distribution of grade level by race and gender is shown in Table 5.

Table 5. RDCP Population distribution by Race, Gender, and Original Grade Level

Race	Gender	Original Grade 13	Original Grade 14	Original Grade 15	Total Gender by Race
White	Female	11.3%	3.4%	0.8%	15.5%
	Male	47.2%	24.6%	12.7%	84.5%
	Total	58.5%	28.0%	13.5%	100.0%
Non-White	Female	11.5%	0.8%	0.8%	13.1%
	Male	54.1%	22.1%	10.7%	86.9%
	Total	65.6%	23.0%	11.5%	100.0%

The small differences between original grade level and race are <u>not</u> statistically significant. That is, for each grade level there was approximately the same percentage of Whites and Non-Whites. This distribution is illustrated in Figure 2.

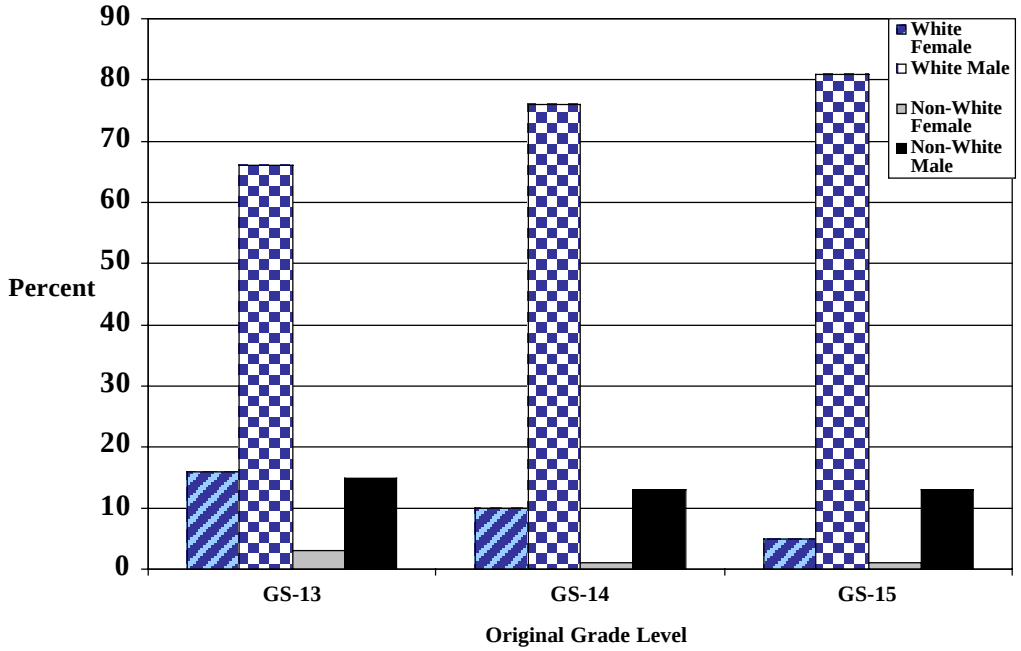


Figure 2. Distribution of race and gender within original grade level.

However, there is a significant difference between the genders (across race). As shown in Table 6, there were substantially higher percentages of males in the GS-14 and GS-15 original grade levels compared to the females. For example, only 5.4% of the females were originally GS-15s but 14.6% of the males were originally GS-15s.

Table 6. Distribution of Original Grade Level within Gender.

Gender	Original Grade			Total Gender
	GS-13	GS-14	GS-15	
Female	75.0%	19.6%	5.4%	100.0%
Male	56.9%	28.4%	14.7%	100.0%

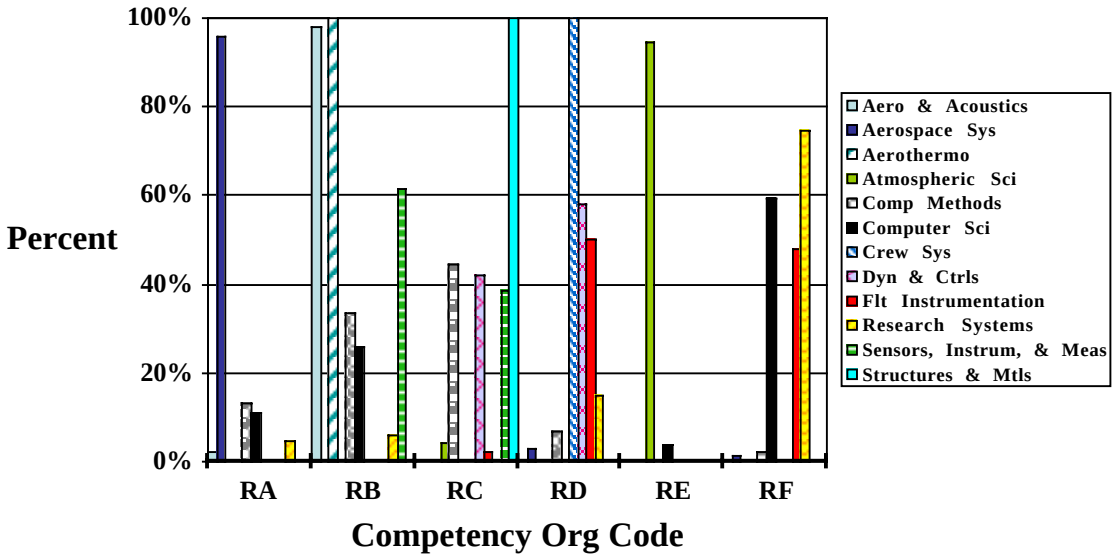
Peer Groups and Competencies

As indicated by the Table 7 below showing the breakout of peer groups within each Competency, a particular Competency has a dominant peer group even though it may participate in other peer groups. In total, fifty-seven branches participate in RDCP.

Table 7. Distribution of Peer Groups within each Competency.

Reviewee Peer Group	Competency Percentage					
	RA	RB	RC	RD	RE	RF
Aero & Acoustics	2%	47%				
Aerospace Sys	80%			1%		1%
Aerothermo		20%				
Atmospheric Science			2%		99%	1%
Computational Methods	7%	8%	15%	2%		1%
Computer Science	4%	4%			1%	12%
Crew Systems				40%		
Dynamics & Controls			20%	26%		
Flight Instrumentation			1%	17%		15%
Research Systems	7%	4%		14%		70%
Sensors, Instrum & Meas		17%	16%			
Structures & Materials			46%			
TOTAL	100%	100%	100%	100%	100%	100%

This distribution is illustrated in Figure 3, below.



The percentage within each peer group made up by each Competency, along with the breakout by grade level, is shown in Table 8.

Table 8. Composition of Peer Groups by Percentage of Original Grade and Competency

Reviewee Peer Group	Original Grade	Competency Org Code						TOTAL by Grade
		RA	RB	RC	RD	RE	RF	
Aero & Acoustics	13	2%	53%					55%
	14	0%	30%					30%
	15	0%	15%					15%
	Total	2%	98%					
Aerospace Systems Analysis	13	61%			1%		1%	64%
	14	26%			0%		0%	26%
	15	9%			1%		0%	10%
	Total	96%			3%		1%	
Aerothermo	13		56%					56%
	14		36%					36%
	15		8%					8%
	Total		100%					
Atmospheric Science	13			3%		43%	0%	46%
	14			0%		24%	0%	24%
	15			1%		28%	1%	31%
	Total			4%		94%	1%	
Computational Methods	13	7%	13%	22%	7%		2%	51%
	14	4%	11%	13%	0%		0%	29%
	15	2%	9%	9%	0%		0%	20%
	Total	13%	33%	44%	7%		2%	
Computer Science	13	4%	11%			4%	37%	56%
	14	7%	15%			0%	18%	41%
	15	0%	0%			0%	4%	4%
	Total	11%	26%			4%	55%	
Crew Systems	13				67%			67%
	14				26%			26%
	15				7%			7%
	Total				100%			
Dynamics & Controls	13			26%	30%			56%
	14			11%	21%			32%
	15			5%	7%			12%
	Total			42%	58%			
Flight Instrumentation	13			2%	34%		34%	70%
	14			0%	16%		14%	30%
	15			0%	0%		0%	0%
	Total			2%	50%		48%	
Research Systems	13	5%	5%		12%		47%	68%
	14	0%	1%		3%		17%	21%
	15	0%	0%		1%		10%	11%
	Total	5%	6%		15%		74%	
Sensors, Instrumentation & Meas	13		40%	21%				61%
	14		10%	10%				20%
	15		11%	8%				19%
	Total		61%	39%				
Structures & Materials	13			54%				54%
	14			31%				31%
	15			15%				15%
	Total			100%				

Amount of Time Involved

Four sessions have been conducted to date (starting in July 2001), reviewing a total of 283 employees in about 56 branches over 32 panels involving a total of 216 employees as panel members. Time was required for the reviewees and supervisors to prepare the packages, for the panel members to review the packages including conducting in-depth reviews and for the actual panel evaluation meetings. Time was also required to attend training sessions both as reviewees and as panel members. Time involvement was measured in two ways: subjective responses to session participant surveys and analysis of RDCP job order (JO) charges.

RDCP has a JO (AS7805) to which participants may charge their time. An analysis of the charges made for each pay period in 2002 was done. This time period covered sessions 2, 3 and 4. (Data for session 1 was incomplete because session 1 started in 2001 for which data were unavailable.) Although not every participant charged to this JO to account for his or her time spent on the RDCP, a very large percentage did use the JO: 92 % of the reviewees, 93 % of the panel members, and 36 % of the branch heads. Average time spent on RDCP each session was 36 hours for the branch heads, 53 hours for both the reviewees and the panel members. The average number of hours reported to the JO for each of session 2, 3, and 4 are shown in Figure 4 by the participant role (e.g., branch heads, reviewees, and panel members.)

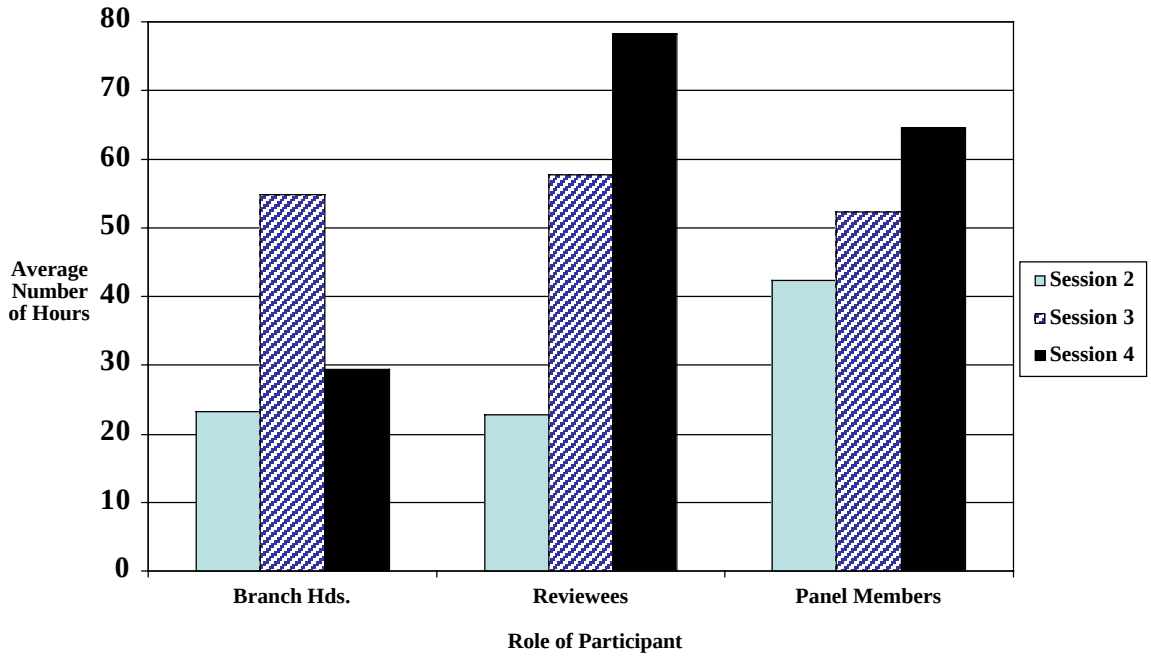


Figure 4. RDCP JO Time Charges by Role and Session 2, 3, and 4.

In response to a question about how much time was spent on the RDCP in a survey conducted after each session, the responses were a little higher than that measured by examining the JO charges. About 50 % of the participants completed the survey. These data indicated that average time spent on RDCP each session was 42 hours for the branch heads, 62 hours for the reviewees, and 56 hours for the panel members.

The average number of hours reported in the session survey for each of session 2, 3, and 4 are shown in Figure 5 by the participant role (e.g., branch heads, reviewees, and panel members.)

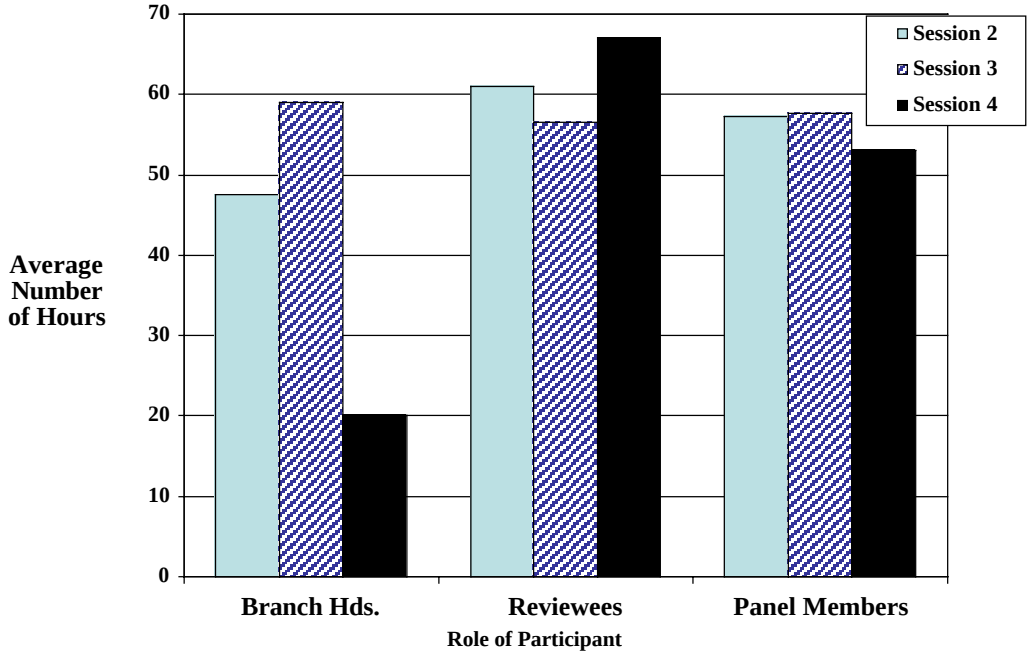


Figure 5. Reported time spent on RDCP via survey for sessions 2, 3, and 4 by role of participant.

There is no way to know if the same people reported using the JO as responded to the survey. For the JO charges, both reviewee and panel member times increased from Session 2 through Session 4, but stayed about the same for each session according to the survey responses. The percentage of people charging to the JO stayed about the same for each session. Of course any measure of time involved is only as good as the data people entered. These data may be off depending upon how accurately people kept track of the time they spent on RDCP.

RESULTS TO DATE

Four sessions have been conducted as of March 1, 2003 (starting in August 2001), reviewing a total of 283 employees. A total of 795 were originally assigned one of nine sessions for review, but that number has been refined since the first session to the current number of 743 reviewees. Subtracting the 25 people who have indicated that they intend to retire by the end of FY04, the actual number of current reviewees is 718. Therefore, 39% of the initial reviews were done by the end of session 4. The remaining sessions are scheduled to be complete by the end of FY04.

In summary, of the 283 reviews conducted, the panels determined that an average of 51% were above grade, 42% were determined to be at grade, less than 1% were determined to below grade, and the remainder, 4%, were not classified (either due to Guide Not Applicable or Insufficient Information). Of the people determined to be at grade, 32 people (11% of the total reviewed or 27% of those found at grade) appealed the panel decision. Nine, or 28% of the appeals, were determined to be above grade. Also, some desk audits were conducted to resolve some of the Guide Not Applicable cases. The above-grade appeal and desk audit decisions changed the total percentage of the above-grade determinations to an average of 55% or 156 promotions (113 to GS-14 and 43 to GS-15 or 62% and 53% of those considered were promoted, respectively) and the at-grade determinations to 41% of all reviews, with the remainder still being Insufficient Information to be reviewed at a later date. The range of promotions per session was 51% to 60%, including resolution of appeals and desk audits.

There is a statistical significant difference by gender for grade change but not for race. More males are promoted than females, as shown in Table 9. But this is in proportion to the distributions within the RDCP population.

Table 9. Distribution of Final Decision over all sessions for gender within race.

		Final Decision			
Race	Gender	Above Grade	At Grade	Other	Total
White	F	7.9%	6.7%	0.8%	15.4%
	M	48.8%	33.8%	2.1%	84.6%
	Total	56.7%	40.5%	2.9%	100.0%
Non-White	F	2.3%	9.3%	0.0%	11.6%
	M	44.2%	37.2%	6.9%	88.4%
	Total	46.5%	46.5%	6.9%	100.0%

The distribution from Table 9 is illustrated in Figure 6 below.

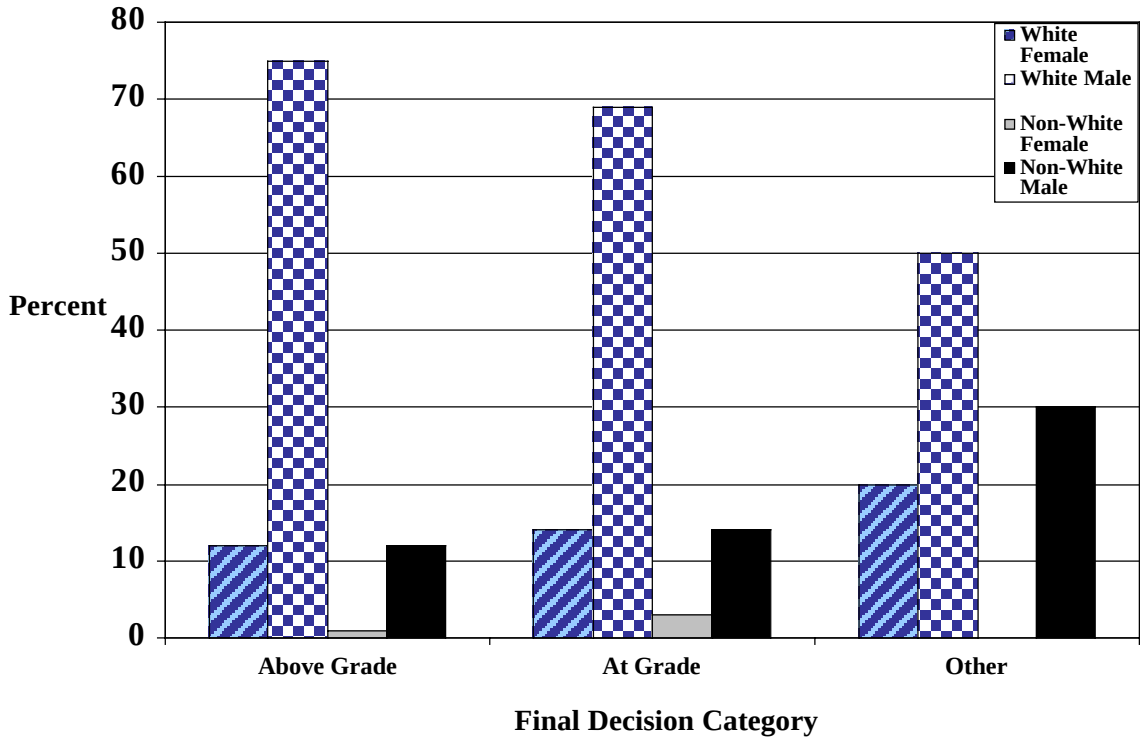


Figure 6. Distribution of race and gender within final panel decision category across sessions 1, 2, 3, and 4.

However, compare Table 10 to Table 11 below. Table 10 shows the distribution of the RDCP population while Table 11 shows the distribution for the people actually reviewed.

Table 10. Distribution of RDCP population (N=743) by race and gender

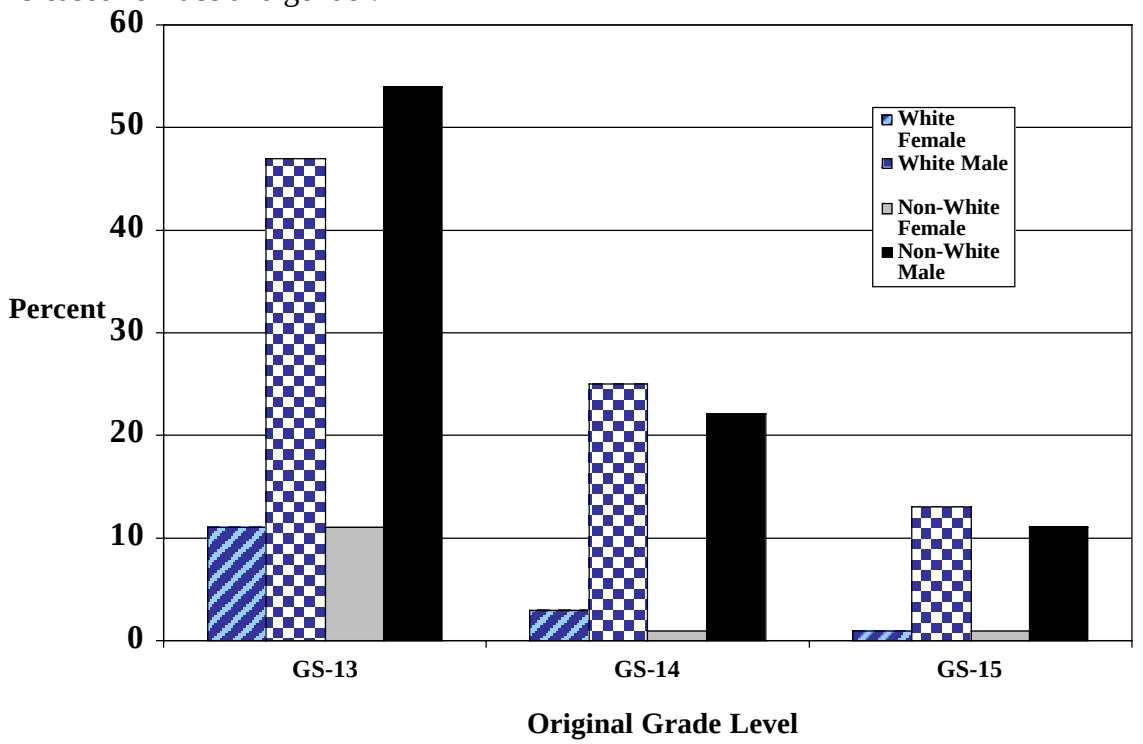
Gender	Race		Total Gender
	White	Non-White	
F	12.9%	2.2%	15.1%
M	70.7%	14.3%	84.9%
Total Race	83.6%	16.4%	100.0%

Table 11. Distribution of RDCP Reviewees through Session 4 (n=283) by race and gender.

Gender	Race		Total Gender
	White	Non-White	
F	13.1%	1.8%	14.9%
M	71.7%	13.4%	85.1%
Total Race	84.8%	15.2%	100.0%

Note that the proportions of males and females by race reviewed over all the Peer Groups are very similar to the overall proportions of males and females by race in the RDCP population.

Figures 7a and 7b shows the distribution of original and current grade levels within race. In general, the number of GS-13s decreased and the numbers of GS-14's and GS-15's increased for race and gender.



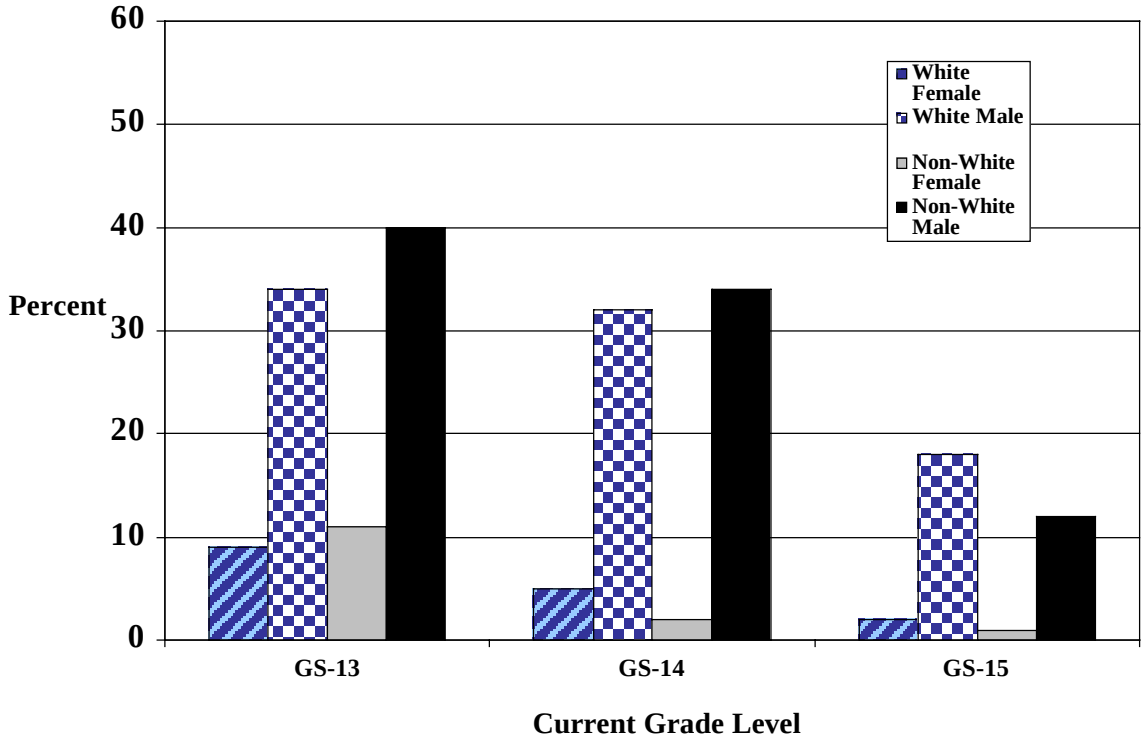


Figure 7a and 7b. Comparison of original and current grade level, respectively, for RDCP population distribution of gender within race.

Table 12 shows the distribution of the final decision category by Competency. The distribution of minorities and gender for each peer group by final decision category is shown in Table A-2 in Appendix A. There are not any significant differences for grade changes (promotions) of those people reviewed between the peer groups, competencies, or sessions. Furthermore, there were not any significant interactions among these factors.

Table 12 . Final Decisions for Each Competency by race and gender.

Competency	Race	Gender	Final Decision			Total
			Above Grade	At Grade	Other	
ASCAC (RA)	White	F	7.4%	11.1%	3.7%	22.2%
		M	40.7%	33.3%	3.7%	77.8%
		Total	48.1%	44.4%	7.4%	100.0%
	Nonwhite	F	0.0%	0.0%	0.0%	0.0%
		M	50.0%	50.0%		100.0%
		Total	50.0%	50.0%		100.0%
AAAC (RB)	White	F	5.3%	5.3%	0.0%	10.5%
		M	50.9%	35.1%	3.5%	89.5%
		Total	56.1%	40.4%	3.5%	100.0%
	Nonwhite	F	0.0%	25.0%		25.0%
		M	37.5%	37.5%		75.0%
		Total	37.5%	62.5%		100.0%
SMC (RC)	White	F	14.0%	9.3%		23.3%
		M	46.5%	30.2%		76.7%
		Total	60.5%	39.5%		100.0%
	Nonwhite	F	8.3%	16.7%	0.0%	25.0%
		M	33.3%	33.3%	8.3%	75.0%
		Total	41.7%	50.0%	8.3%	100.0%
AIRSC (RD)	White	F	8.2%	6.1%	0.0%	14.3%
		M	51.0%	30.6%	2.0%	85.7%
		Total	59.2%	36.7%	2.0%	100.0%
	Nonwhite	F	0.0%	0.0%	0.0%	0.0%
		M	60.0%	30.0%	10.0%	100.0%
		Total	60.0%	30.0%	10.0%	100.0%
AtSC (RE)	White	F	7.1%	3.6%		10.7%
		M	35.7%	53.6%		89.3%
		Total	42.9%	57.1%		100.0%
	Nonwhite	F	0.0%	0.0%	0.0%	0.0%
		M	50.0%	50.0%		100.0%
		Total	50.0%	50.0%		100.0%
SEC (RF)	White	F	5.6%	5.6%	2.8%	13.9%
		M	61.1%	25.0%	0.0%	86.1%
		Total	66.7%	30.6%	2.8%	100.0%
	Nonwhite	F	0.0%	0.0%	0.0%	0.0%
		M	40.0%	40.0%	20.0%	100.0%
		Total	40.0%	40.0%	20.0%	100.0%

The following Tables 13a and 13b show the original grade level by race and gender compared to the current grade level by race and gender. These numbers do not include any employees new to RDCP, that is, not assigned to one of the original nine sessions.

Table 13 a. Original Grade Level by Race and Gender.

		Original Grade			
Race	Gender	13	14	15	Total
White	F	11.3%	3.4%	0.8%	15.5%
	M	47.2%	24.6%	12.7%	84.5%
	Total	58.5%	28.0%	13.5%	100.0%
Non-White	F	11.5%	0.8%	0.8%	13.1%
	M	54.1%	22.1%	10.7%	86.9%
	Total	65.6%	23.0%	11.5%	100.0%

Table 13 b. Current Grade Level by Race and Gender.

		Current Grade			
Race	Gender	13	14	15	Total
White	F	9.0%	4.8%	1.6%	15.5%
	M	34.3%	32.4%	17.9%	84.5%
	Total	43.3%	37.2%	19.5%	100.0%
Non-White	F	10.7%	1.6%	0.8%	13.1%
	M	40.2%	34.4%	12.3%	86.9%
	Total	50.8%	36.1%	13.1%	100.0%

There is no statistical significant difference in grade level change between White and Non-White of those actually reviewed, as can be seen by looking at Tables 14 and 15 below.

Table 14. Grade Change by Gender over all sessions.

Gender	**No Grade Change**	**Grade Change (Promotion)**	**Total**
Female	52.4%	47.6%	100%
Male	47.7%	52.3%	100%
Total	48.4%	51.6%	100%

Table 15. Grade Change by Race over all sessions.

Race	**No Grade Change**	**Grade Change (Promotion)**	**Total**
White	47.1%	52.9%	100%
Non-White	55.8%	44.2%	100%
Total	48.4%	51.6%	100%

Table 16. Distribution within Current Grade Level by Gender in total RDCP Population

Gender	Current Grade			Total
	13	14	15	
Female	9.2%	4.3%	1.5%	15.0%
Male	35.3%	32.7%	17.0%	85.0%
Total	44.5%	37.0%	18.4%	100.0%

Table 17. Distribution of Current Grade Level within Gender for Total RDCP Population

Gender	Current Grade			Total
	13	14	15	
Female	61.6%	28.6%	9.8%	100.0%
Male	41.5%	38.4%	20.1%	100.0%
Total	44.5%	37.0%	18.4%	100.0%

Tables 16 and 17 show the breakout of current grade level by gender including those reviewed and not reviewed. For both genders, the percentage of GS-13s decreased (not including new GS-13s after original RDCP session assignment), while the percentage of GS-14s and GS-15s increased.

However, the grade level change between the genders was not statistically significant. That is, of those reviewed, within each gender the same percentage of females as males were promoted. Figure 8 illustrates the lack of significance in the grade level changes.

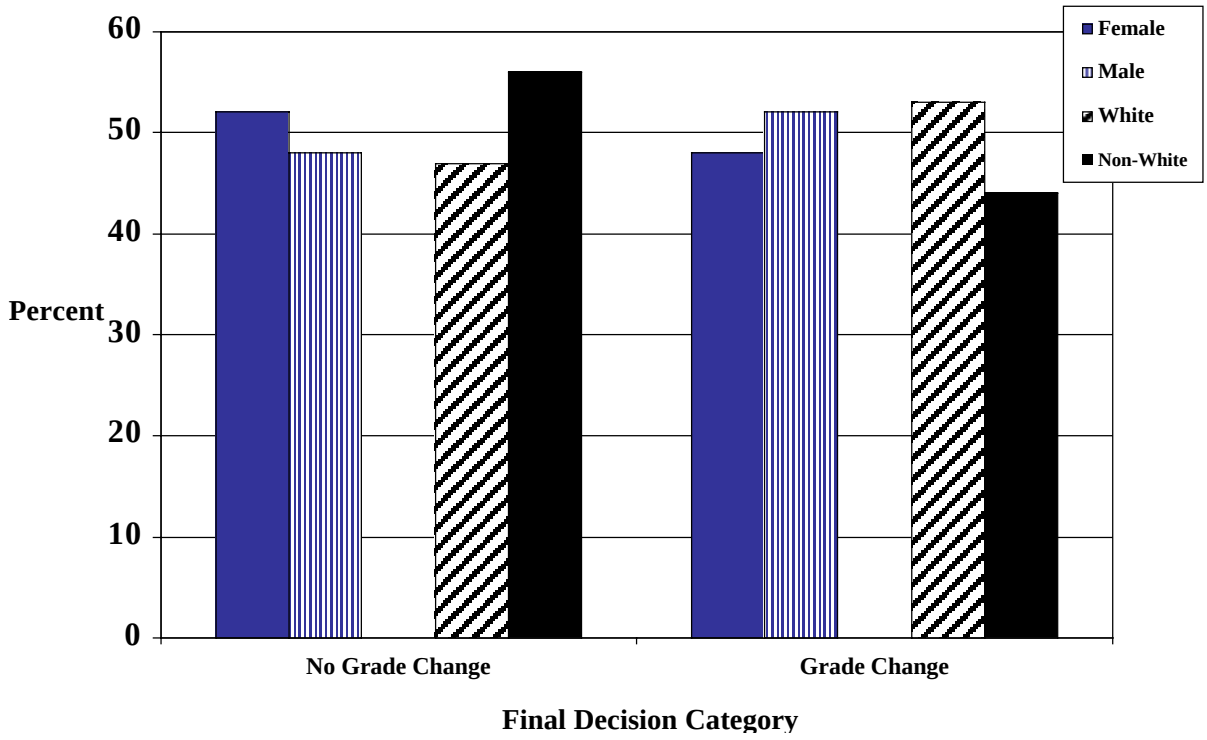


Figure 8. Comparison of grade change for gender and race for reviewees.

Appendix B contains several tables that provide the overall results in terms of final decision category, as well as, the results for each session by both Peer Group and Competency.

Figures 9a and 9b illustrate within each peer group the differences between the original and current grade levels. For example, the Aerodynamics and Acoustics peer group originally had 53% GS-13s, 30% GS-14s, and 17% GS-15s. As of the end of session 4, this peer group had 41% GS-13s, 34% GS-14s, and 25% GS-15s. These numbers include those who were and were not reviewed. In general, the number of GS-13s decreased, while the number of GS-14s and GS-15s increased for each peer group.

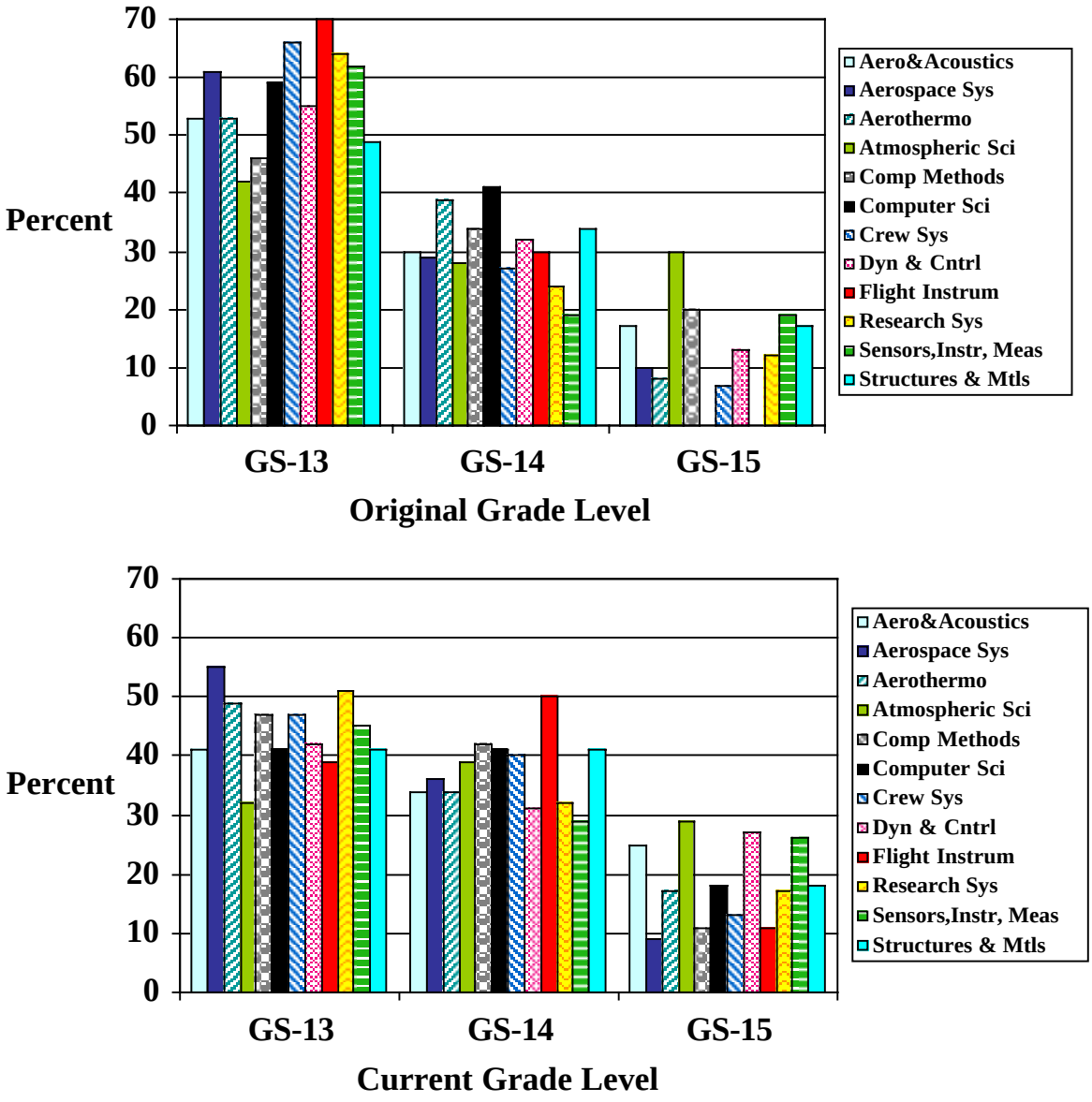
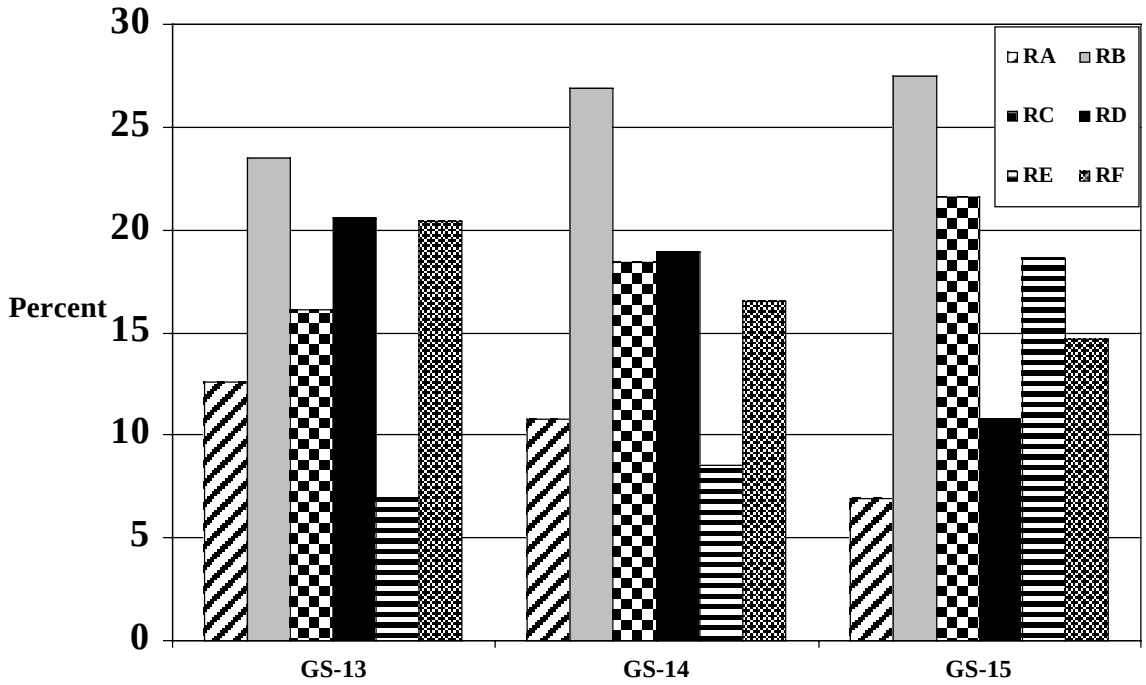


Figure 9a and 9b. Initial and current grade levels within each Peer Group.

Figures 10a and 10b illustrate within each grade level for each Competency the differences between the original and current grade levels. That is, of the original GS-13s, 13% were in RA (Aerospace Systems, Concepts, and Analysis), 23% in RB (Aerodynamics, Aerothermodynamics, and Acoustics), etc. As of the end of session 4, of the GS-13s, 14% were in RA, 25% in RB, etc. These numbers include those who were and were not reviewed.



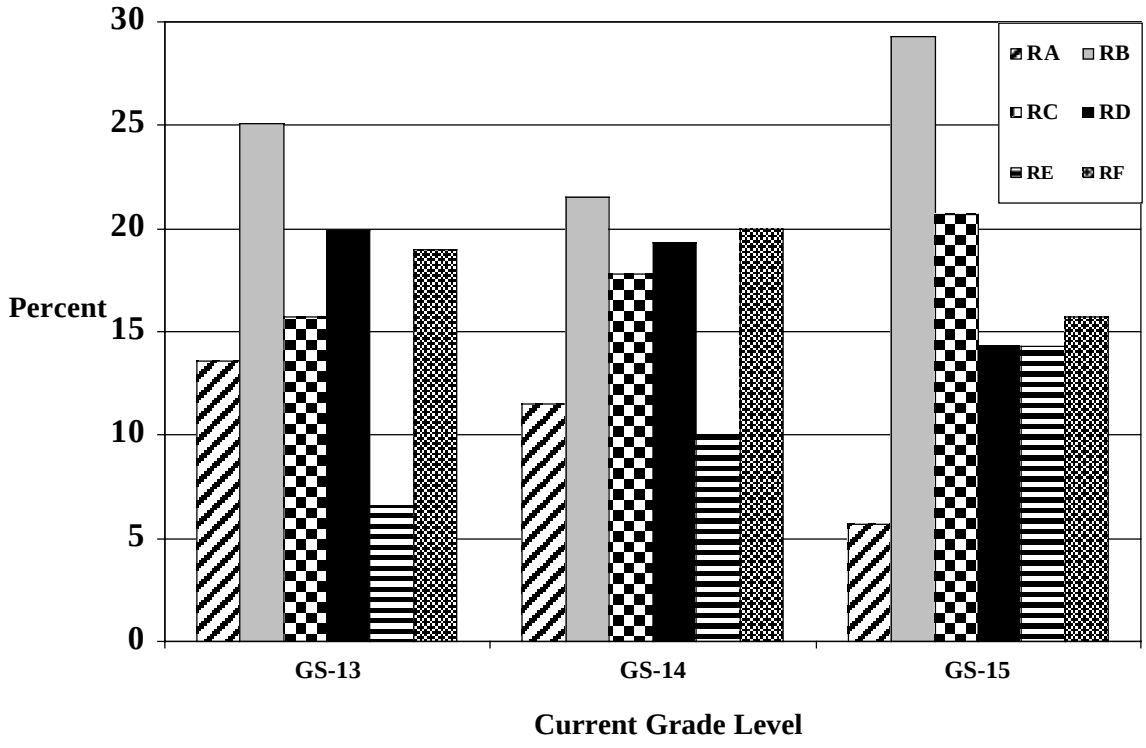


Figure 9a and 9b. Comparison within original and current grade level, respectively, for RDCP population by Competency.

FEEDBACK

Session Surveys

At the end of each session, a brief, voluntary, survey was made of that session's participants (Branch Heads, Panel Members, and Reviewees). In addition to rating twelve items from strongly disagree to strongly agree, the respondents were given the opportunity to make additional comments. (A copy of the survey questions is in Appendix C.) All of these responses were analyzed and summarized into reports posted onto the RDCP website, http://ohr.larc.nasa.gov/RDCP.html. This is a summary of the major findings and trends from those surveys.

Overall, there was an improvement in average RDCP ratings with each session. The rating scale was numbers from 1 to 5 indicating strongly disagree to strongly agree, respectively. The average rating scores for Sessions 1 and 2 ranged from 2.48 to 3.64, while for Sessions 3 and 4 the survey responses were between 2.7 and 4.1. Sessions 1 and 2 had only five items with ratings greater than or equal to 3.0 (neither disagree nor agree). But, by the end of Session 4, this had improved so that nine items had average ratings greater than or equal to 3.0. The three items that were below 3.0 were Fair Selection (item 5) 2.98, Improved Classification Process (item 11) 2.93, and Improved Morale (item 13) 2.98. And, because these three items were all between 2.93 and 2.98, they were only marginally below 3.0.

For eight items there were statistically significant differences according to an analysis of variance (ANOVA) between the sessions. These were Adequate Training (item 6), Adequate Handbook (item 7), Understandable Process (item 8), Clear Criteria (item 9), Conducted Consistently (item 10), Improved Promotion Process (item 12), Improved Morale (item 13), and Adequate Panel Report (item 16). For all of these items, in general, the average rating score improved with each session. The average ratings for these items are shown for each session in Figure 11.

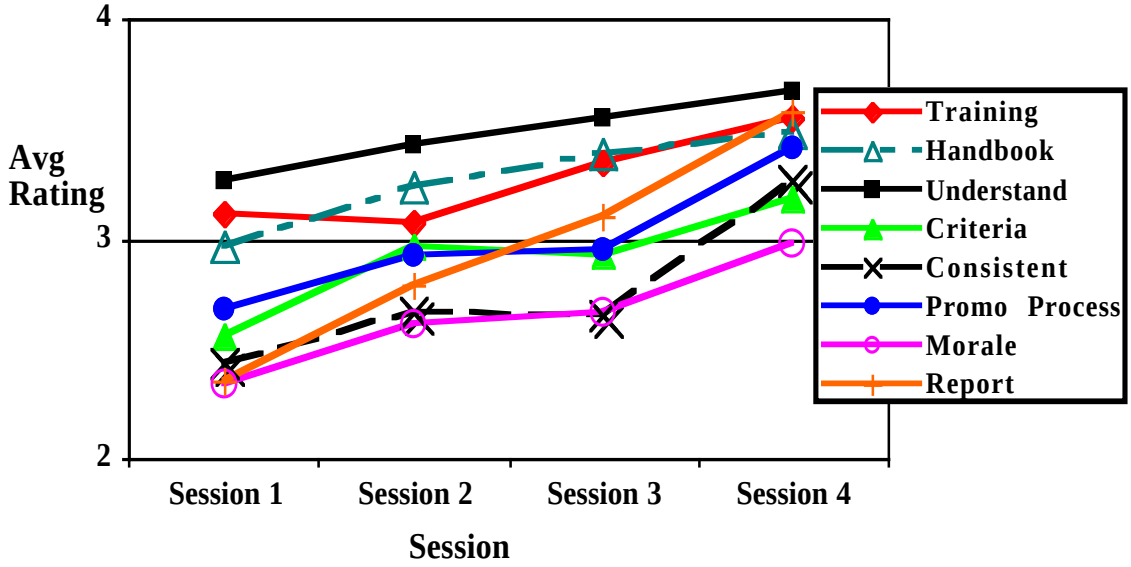


Figure 11. Significant survey response differences across session

In addition, there were some items for which the average rating scores varied by the role of the participant: Branch Head, panel member, or reviewee. Branch heads reported less time spent on the process (item 3) than the panel members or reviewees. Also, Branch Heads had higher ratings for Fair Selection (item 5), Adequate Training (item 6), Adequate Handbook (item 7), Understandable Process (item 8), and Clear Criteria (item 9). These responses are illustrated in Figure 12.

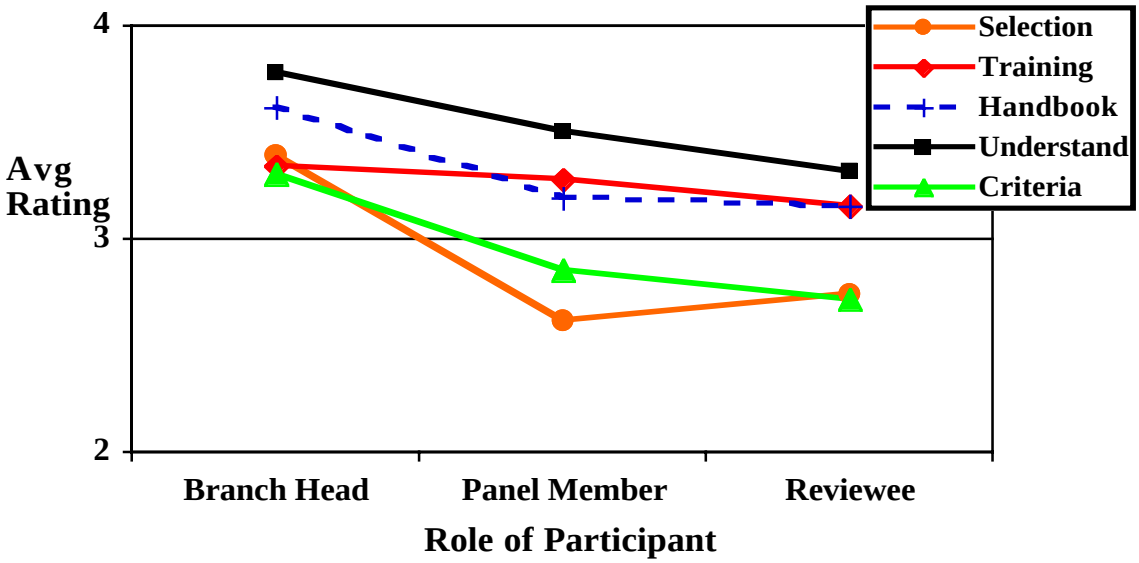


Figure 12. Significant survey response differences for participant role.

Although there was not an overall difference in ratings of many items between the role of the participants, there were several items for which reviewees rated significantly differently depending upon if they were promoted or not. Reviewees who were promoted rated these items higher than those who were decided to be at grade or for whom another decision was made, guide not applicable or insufficient information: Training (item 6), Adequate Handbook (item 7), Understandable Process (item 8), Improved Promotion Process (item 12), and Improved Morale (item 13). In addition, there were some items that furthered differed. For Clear Criteria (item 9), Agreed with Panel (item 15), and Adequate Panel Report (item 16), the ratings were highest for those promoted and lowest for those who received a decision of guide not applicable or insufficient information. The ratings for those decided at grade were in between and were also significantly different from the others. These responses are illustrated in Figure 13.

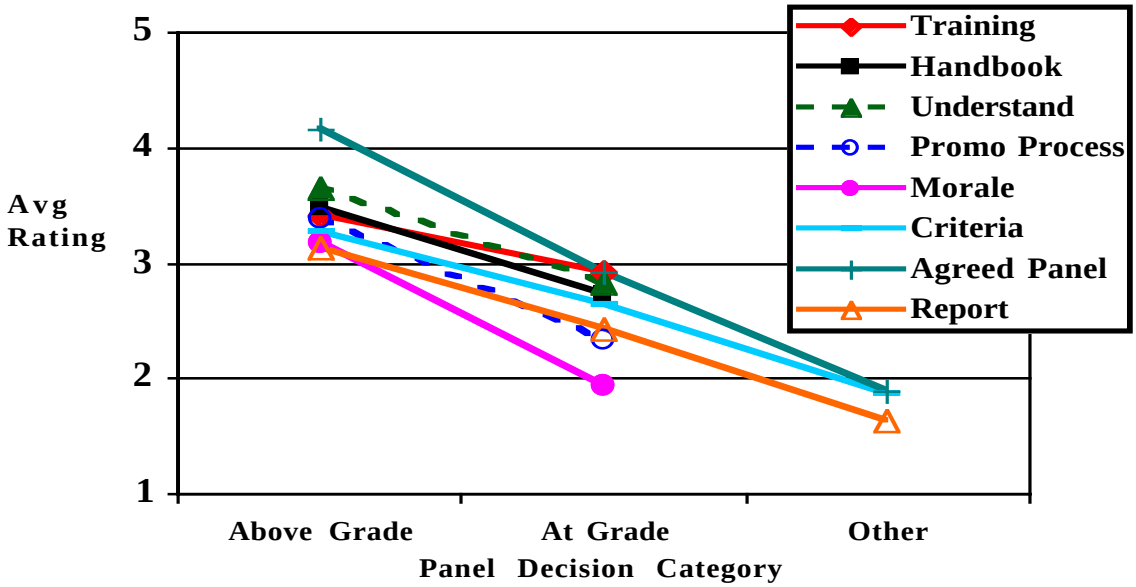


Figure 13. Significant survey response differences for Reviewees by panel decision category.

In terms of comments received from the survey participants, they could be grouped into these general areas: general, managerial responsibility, time, consistency and quality, the guides, training, and the process. Both positive and negative comments were received in each of these areas in each session. Some trends however were evident across sessions. As acceptance and understanding increased, the comments concentrated more on the quality and consistency of the process and rather than the need for the process as was evident from the first sessions. Requests for better explanation of criteria were consistent across the sessions. All of these items, as well as other concerns, have been addressed in training to a greater extent each session.

Center-wide Surveys

The NASA Langley Research Center has conducted two Center-wide Organizational Performance surveys in recent years. The first was conducted in 2000 and the second was done in 2002. Respondents were asked to rate the extent various items were true on a scale of 1 to 5 ("to a very small extent" to "to a very great extent", respectively). Two of these items are in part what led to the development of the RDCP initially. These two items, repeated in the 2002 survey, were the following:

> " Do you believe the Center's promotion processes provide employees a clear understanding of what they must do to be considered for promotion and a clear understanding of the process by which promotion decisions are made."
>
> "Are the Center's human resources (e.g., job competitions, promotions, awards, classification, training) fair and equitable."

The mean rating overall of R&T for the first item was 2.32 in the 2000 survey but increased to 2.80 in the 2002 survey. This difference in ratings for this first item was the largest increase from the 2000 survey. Likewise, the mean rating overall of R&T for the second item was 2.88 in the 2000 survey and increased to 3.02 in the 2002 survey. The RDCP was implemented between these two surveys, and according to 2002 survey comments was part of the reason for the ratings increase for these particular items. The 2002 survey report said, " In particular, some respondents stated that the new 'Research and Development Classification Process' (RDCP) has been successful in clarifying and putting objectivity in to a previously vague promotion process and that, although improvements are necessary, is providing a useful mechanism for classifying and promoting deserving workers in the technical areas. "

RDCP covered employees make up approximately 70% of the entire R&T population. And, while from the survey results it is not possible to discern who was and was not a RDCP respondent, the distribution of R&T respondents matched the general distribution of the R&T population, so that the assumption is made that a proportionate number of RDCP covered employees responded to the surveys. The mean rating overall the Center for these items were essentially the same as those for R&T because likewise R&T made up a large portion of both the population and survey respondents.

CHANGES MADE IN RDCP

The RDCP Manager assisted by the RDCP Advisory Committee (consisting of representatives from each Competency, OHR, EEO, and OCO) is charged with conducting, monitoring and improving the Research and Development Classification Process so that it is of high quality and consistency, as well as runs smoothly, by the end of the ninth session. In order to accomplish this, some changes have been made and will continue to be made through the ninth session or until the process is stabilized. Table 18 is a list of the major changes to date which have all been documented in updates to the RDCP Handbook:

Table 18. List of changes made to RDCP through October 2002.

Item	Change
1	Changed supervisor informed to supervisor consents to employee serving as panel member.
2	Added RDCP manager as a person to field questions about panel decisions or determinations.
3	Specified the additional peer group wild card slots as being up to 30%.
4	Replaced "quarter" with "session."
5	Added how new employees are accommodated. Put in session 10 or subsequent sessions.
6	Added "The supervisor and Competency Director decide on the appropriate length of review delay depending upon the situation.
7	Clarified delay due to intend to retire. Request goes to Competency Director for approval before sent to RDCP manager and OHR. Needs to include anticipated date of retirement. If not retire, reviewed closest session to originally assigned session.
8	Changed panel size from seven to minimum of five to accommodate fewer reviewees in a session.
9	Clarified role of OHR, EEO representatives. Advisory only. Do not vote in panel decision.
10	In-depth Reviewers must contact four people: One person must be the Branch Head/Supervisor and one should be from outside NASA or at least outside LaRC if possible.
11	Clarified that panel returns actual grade rather than a category for results.
12	Added that ties within any promotion queue broken by Federal service computation date.
13	Clarified "below grade" and "borderline grade" scores and resulting procedures.
14	Added that subject matter expert must be a civil servant, cannot be someone who served on the panel, and must be trained in RDCP.
15	Request for reevaluations clarified. RDCP Manager must approve rationale for the request.
16	Extension of reevaluation appeal process from 30 days to 60 days for employee to receive results.

17	Clarified development as part of research
18	RGEG panels can review using the EDGEG Part 3, rather than having to kick out reviewee for Guide Not Applicable.
19	No current grade information to be included anywhere in the reviewee write-ups.
20	Clarified Team Leadership. Don't have to be a Level 3 or 4 or have other title to get credit. Can influence other's research to get credit.
21	Added electronic submission of packages to RDCP Manager along with hard copy to OHR by due date.
22	Added additional information to RDCP website.
23	Added Legal Representative to formal Advisory Committee membership
24	Panel member cannot also be reviewee in same session.
25	Competency Director obtains Branch Head concurrence for employee's assignment as panel member.
26	"Supervision received "clarified.
27	Various minor Employee Accomplishment Record format and instruction changes
28	Peer Group Name and Definition changes. Eliminated two Advanced Instrumentation groups and created new Flight Instrumentation Research and Sensors, Instrumentation, and Measurement groups.
29	Use of LF515 discontinued to list contacts. Word format fine.
30	Created new RDCP database to track progress and results. Also used to send and receive RDCP documents and notices.
31	Enhanced training materials for reviewees, branch heads, and panel members.
32	Consensus panel reports are written real-time during panel sessions.

Note: As of April 17, 2003, a new LMS process (CP-0019) and Guidance Document were approved. Now that the process and document are approved, the Handbook will no longer be used.

Future Plans For Improvement

From survey responses and observations, several areas have been identified for future improvement. These include the following for the near term through Session 9:

- Clarification of the Guide criteria, including providing more examples in the Guidance document and in training.
- Enhanced training, especially by producing a video of a mock panel session.
- Continued education about how to best prepare a reviewee's package so that less time is required by all, both for preparation and review.
- Enhancements to the RDCP database to provide more flexibility and efficiency.
- Refinement of peer groups, especially Research Systems, to better fit the covered employee's area of work
- Adjustments in the ST pool referral criteria based on those used by other agencies

In addition, in the future after Session 9, additional changes may include the following:

- Combining multiple peer groups in peer evaluation meetings
- Disclosure of peer panel member names
- R&T employees participating as peer reviewers in other agency processes
- Inviting outside LaRC peers to be reviewers for RDCP
- Expanding definitions of the criteria to include more special activities, especially non technical ones
- If necessary, adjusting RDCP to fit future human capital resource management initiatives, such as pay banding or performance based pay.
- Adjusting RDCP to fit with future employee career profiles (e.g., not 30-year NASA employees anymore).

ISSUES

Budget

Effective and timely conducting of the RDCP depends upon having enough available budget to promote all of those reviewees the panels decide are above their current grade. Any reduction in budget causes a reduction in the number of people who can be reviewed in a session or a delay in conducting the session because no more people are reviewed than budget is available, based on the historical promotion rate of about 50%. From session survey comments received, such reductions or threat of reductions reduce morale for all participants: reviewees, panel members, and branch heads. Some people view these constraints as implementing a form of quota on the RDCP covered positions. Furthermore, such reductions slow down the process such that reviews of all the originally assigned employees and of newly assigned employees slip. Recall that employees were promised the opportunity to be reviewed no later than their originally assigned session. Although, even with the budget constraints, everyone so far has had the opportunity to be reviewed in his or her assigned session and some other people have been moved up as wild cards, the time frames for the sessions were extended beyond those originally planned.

In order to plan the appropriate number of people to be reviewed and number of sessions for each fiscal year, *advance planning and commitment of the required budget is necessary early in the fiscal year.*

Required Budget Estimates for FY03, FY04 and FY05

Nominally three sessions are run each fiscal year although four could run if budget were available early at the beginning of the fiscal year. Fiscal year 2003 should have had Sessions 5, 6, and 7 in it, but session 7 was slipped because of earlier slips in other sessions so that the end of Session 7 will fall into FY2004**.** For example, the start of Session 6 was delayed six weeks to wait for confirmation of budget allocation for the remainder of FY2003. (A delay for the same reason and of similar duration was experienced in March of 2002 for Session 3.) Therefore, promotions for Sessions 7, and 8 will be in fiscal year 2004. Session 9 will start in FY2004 but won't promotions are not likely to be effective until FY2005. See Table 19 for the number of reviewees and estimated number of promotions for the remaining sessions.

Table 19. Session 5 through Session 9 Number of Reviewees and Estimated Promotions.

Fiscal Year	Session	Original No. of Reviewees	Wild Card slots (up to 30%)[1]	Estimated No. of Promotion[2] Original Reviewees	Estimated (or actual) No. of Promotions[2] All Reviewees (with wild cards)
	5 (02-3)	82	0	41	46 (includes reevaluations)
	6 (03-1)	60	6	30	33
2003 total		**142**	**6**	**71**	**79**
	7 (03-2)	74	16	37	45
	8 (03-3)	60	20	30	40
2004 total		**134**	**36**	**67**	**85**
	9 (04-1)	141	0	70	70
2005 total		**141**	**0**	**70**	**70**
All Total		**417**	**42**	**208**	**234**

[1]Wildcard slots for each Competency equal up to 30% of each review session to allow early reviews or re-reviews for insufficient information or other cases. [2]Number of promotions based on historical 50% rate through the first complete cycle of reviews.

Early draft budget allocation for FY03 for RDCP was for 80 promotions. Any fewer than these 80 slots may mean that no wild cards or re-reviews for insufficient information will be permitted for Session 6, which will affect the number of reviewees in future sessions.

Estimated *minimums* of 80 slots are needed for FY03, 85 slots for FY04, and 70 slots for FY05 if the current schedule is to be maintained. To the extent additional slots are added, wild cards could be accommodated and/or the schedules accelerated.

Once the stable review cycle is started, promotion rates should drop to something more like 30% per session based on the experience at other agencies with similar processes. However, because the original nine RDCP sessions have been spread out over four or five fiscal years rather than three years as originally estimated, the steady state reviews that will start in FY2005 also must be planned in the budget. In that case, it may take another session or two to fall down to a steady 30% promotion rate.

CONCLUSIONS

The Research and Development Classification Process (RDCP) has been used to review 283 out of 743 eligible R&T employees in four sessions conducted from July 2001 through September 2002. The original plan was to review all eligible employees within two years during nine sessions or quarters. However, primarily due to limited budget availability along with some other changes, the schedules have stretched out so that the ninth session should start by the end of 2004, a year longer than originally planned. In addition to the 283 employees reviewed, up to 56 branch heads and 216 panel members have participated. The process does require some time, the average is between 32-62 hours, from all participants: branch heads, reviewees, and panel members. The process has had an approximate promotion rate of 55% based on all the people reviewed, after resolution of appeals and desk audits, for each session and has resulted in 156 promotions to GS-14 and GS-15 grade levels through session 4. No statistical differences were found in results by race, Competency, peer group, or session in terms of grade change. Males and females have been promoted in proportion to the RDCP population. Results from surveys conducted at the end of each session indicate improved ratings over the four sessions. In addition, positive comments were received from the recent Center survey about RDCP. However, budget availability drives the rate of the process and is critical to the Center's ability to keep commitments to the covered employees for timely reviews.

Indicators of the success of the RDCP may be survey responses reflecting positive comments and improved employee morale. Ultimately, retention metrics may also be used to partially measure the success of RDCP. Even though some people see the process as time consuming and the job of branch heads, the overall benefits outweigh these current negative perceptions. Also, an apparent consequence of the RDCP is that budget allocations for other types of promotions may have been impacted. Perhaps an early working allocation of the entire Center's promotion budget, including RDCP, might ameliorate this problem. As positive experiences continue with the RDCP, these few negative perceptions and consequences should lessen.

After reviewing the results through Session 4 of the RDCP, the RDCP Manager and Advisory Committee recommend that monitoring of the process continue and improvements be made where possible. They further recommend that *firm budget allocations be made early in each fiscal year* to enable timely reviews.

APPENDIX A – Detailed Data Relative to Gender and Race

Table A-1 Distribution of race and gender for each Peer Group.

PEER GROUP		RACE						Gender Percentage
		NATIVE AMERICAN	ASIAN	BLACK	HISPANIC	WHITE	Total	
Aero & Acoustics	Female		1	2		9	12	0.14
	Male		7	5		64	76	0.86
	Total	0	8	7	0	73	88	
	Percentage	0.00	0.09	0.08	0.00	0.83	1.00	
Aerospace Systems Analysis	Female	0	0	1	0	8	9	0.13
	Male	1	7	0	1	52	61	0.87
	Total	1	7	1	1	60	70	
	Percentage	0.01	0.10	0.01	0.01	0.86	1.00	
Aerothermo & Hypersonic Propulsion	Female		1	0		4	5	0.14
	Male		1	1		29	31	0.86
	Total	0	2	1	0	33	36	
	Percentage	0.00	0.06	0.03	0.00	0.92	1.00	
Atmospheric Science	Female		0	0		10	10	0.14
	Male		12	2		48	62	0.86
	Total	0	12	2	0	58	72	
	Percentage	0.00	0.17	0.03	0.00	0.81	1.00	
Computational Methods	Female		0	0	0	5	5	0.11
	Male		5	1	2	32	40	0.89
	Total	0	5	1	2	37	45	
	Percentage	0.00	0.11	0.02	0.04	0.82	1.00	
Computer Sci & Engineering	Female			0		6	6	0.22
	Male			5		16	21	0.78
	Total	0	0	5	0	22	27	
	Percentage	0.00	0.00	0.19	0.00	0.81	1.00	
Crew Systems	Female		0	0	1	10	11	0.20
	Male		2	3	6	33	44	0.80
	Total	0	2	3	7	43	55	
	Percentage	0.00	0.04	0.05	0.13	0.78	1.00	
Dynamics & Controls	Female		0	1	1	12	14	0.23
	Male		4	1	1	42	48	0.77
	Total	0	4	2	2	54	62	
	Percentage	0.00	0.06	0.03	0.03	0.87	1.00	
Flight Instrumentation Research	Female		0	1		3	4	0.09
	Male		4	1		35	40	0.91
	Total	0	4	2	0	38	44	
	Percentage	0.00	0.09	0.05	0.00	0.86	1.00	
Research Systems	Female	0	1	2	1	13	17	0.13
	Male	1	4	4	8	99	116	0.87
	Total	1	5	6	9	112	133	
	Percentage	0.01	0.04	0.05	0.07	0.84	1.00	
Sensors, Instrum & Measurement	Female	0	0			3	3	0.06
	Male	1	9			39	49	0.94
	Total	1	9	0	0	42	52	
	Percentage	0.02	0.17	0.00	0.00	0.81	1.00	
Structural Mech & Adv Mtls	Female	0	2	1	0	13	16	0.27
	Male	1	1	4	1	36	43	0.73
	Total	1	3	5	1	49	59	
	Percentage	0.02	0.05	0.08	0.02	0.83	1.00	
Race Percentages	Female	0.00	0.04	0.07	0.03	0.86	1.00	0.15
	Male	0.01	0.09	0.04	0.03	0.83	1.00	0.85
	Total	0.01	0.08	0.05	0.03	0.84	1.00	

Table A-2 Distribution of Final Decision by Race and Gender for Each Peer Group.

			Final Decision			
Peer Group	**Race**	**Gender**	**Above Grade**	**At Grade**	**Other**	**Total**
Aerodynamics & Acoustics	White	F	8.0%	12.0%		20.0%
		M	40.0%	36.0%	4.0%	80.0%
		Total	48.0%	48.0%	4.0%	100.0%
	Nonwhite	F	0.0%	28.6%		28.6%
		M	28.6%	42.9%		71.4%
		Total	28.6%	71.4%		100.0%
Aerospace Systems Analysis	White	F	0.0%	9.1%	0.0%	9.1%
		M	45.5%	40.9%	4.5%	90.9%
		Total	45.5%	50.0%	4.5%	100.0%
	Nonwhite	F				0.0%
		M	33.3%	66.7%		100.0%
		Total	33.3%	66.7%		100.0%
Aerothermo-dynamics/ Hypersonic Propulsion	White	F				0.0%
		M	90.0%	10.0%		100.0%
		Total	90.0%	10.0%		100.0%
	Nonwhite	F				0.0%
		M				0.0%
		Total				0.0%
Atmospheric Science	White	F	6.7%	3.3%		10.0%
		M	36.7%	53.3%		90.0%
		Total	43.3%	56.7%		100.0%
	Nonwhite	F				0.0%
		M	75.0%	25.0%		100.0%
		Total	75.0%	25.0%		100.0%
Computational Methods	White	F	7.1%	7.1%		14.3%
		M	42.9%	42.9%		85.7%
		Total	50.0%	50.0%		100.0%
	Nonwhite	F				0.0%
		M	66.7%	33.3%		100.0%
		Total	66.7%	33.3%		100.0%
Computer Science	White	F	27.3%	0.0%	9.1%	36.4%
		M	45.5%	18.2%	0.0%	63.6%
		Total	72.7%	18.2%	9.1%	100.0%
	Nonwhite	F				0.0%
		M		100.0%		100.0%
		Total		100.0%		100.0%

Table A-2 Distribution of Final Decision by Race and Gender for Each Peer Group, continued.

PEER GROUP	Race	Gender	Final Decision			Total
			Above Grade	At Grade	Other	
Crew Systems	White	F	26.7%	0.0%		26.7%
		M	53.3%	20.0%		73.3%
		Total	80.0%	20.0%		100.0%
	Nonwhite	F				0.0%
		M	25.0%	50.0%	25.0%	100.0%
		Total	25.0%	50.0%	25.0%	100.0%
Dynamics & Controls	White	F	8.3%	4.2%		12.5%
		M	58.3%	29.2%		87.5%
		Total	66.7%	33.3%		100.0%
	Nonwhite	F	0.0%	25.0%	0.0%	25.0%
		M	50.0%	0.0%	25.0%	75.0%
		Total	50.0%	25.0%	25.0%	100.0%
Flight Instrumentation	White	F	0.0%	11.1%	0.0%	11.1%
		M	55.6%	27.8%	5.6%	88.9%
		Total	55.6%	38.9%	5.6%	100.0%
	Nonwhite	F				0.0%
		M	100.0%			100.0%
		Total	100.0%			100.0%
Research Systems	White	F	3.1%	6.3%	3.1%	12.5%
		M	59.4%	25.0%	3.1%	87.5%
		Total	62.5%	31.3%	3.1%	100.0%
	Nonwhite	F				0.0%
		M	33.3%	50.0%	16.7%	100.0%
		Total	33.3%	50.0%	16.7%	100.0%
Sensors, Instrum & Meas	White	F	0.0%	5.3%	0.0%	5.3%
		M	36.8%	52.6%	5.3%	94.7%
		Total	36.8%	57.9%	5.3%	100.0%
	Nonwhite	F				0.0%
		M	100.0%			100.0%
		Total	100.0%			100.0%
Structures & Materials	White	F	20.0%	15.0%		35.0%
		M	40.0%	25.0%		65.0%
		Total	60.0%	40.0%		100.0%
	Nonwhite	F	14.3%	14.3%		28.6%
		M	28.6%	42.9%		71.4%
		Total	42.9%	57.1%		100.0%

APPENDIX B – Panel Decision Results by Category for Each Session by Peer Group and by Competency

Table B- 1a Results Over All Sessions by Peer Group

All Sessions Peer Group		Final Decision			Total
		Above Grade	At Grade	Other	
Aero & Acoustics	Count	14	17	1	32
	% of Total	4.9%	6.0%	0.4%	11.3%
Aerospace Sys	Count	11	13	1	25
	% of Total	3.9%	4.6%	0.4%	8.8%
Aerothermo	Count	9	1	0	10
	% of Total	3.2%	0.4%	0.0%	3.5%
Atmospheric Science	Count	16	18	0	34
	% of Total	5.7%	6.4%	0.0%	12.0%
Computational Methods	Count	9	8	0	17
	% of Total	3.2%	2.8%	0	6.0%
Computer Sci	Count	8	3	1	12
	% of Total	2.8%	1.1%	0.4%	4.2%
Crew Systems	Count	13	5	1	19
	% of Total	4.6%	1.8%	0.4%	6.7%
Dynamics & Ctrls	Count	18	9	1	28
	% of Total	6.4%	3.2%	0.4%	9.9%
Flight Instrumentation	Count	13	7	1	21
	% of Total	4.6%	2.5%	0.4%	7.4%
Research Systems	Count	22	13	3	38
	% of Total	7.8%	4.6%	1.1%	13.4%
Sensors, Instrum & Meas	Count	8	11	1	20
	% of Total	2.8%	3.9%	0.4%	7.1%
Structures & Mtls	Count	15	12	0	27
	% of Total	5.3%	4.2%	0.0%	9.5%
Total	Count	156	117	10	283
	% of Total	55.1%	41.3%	3.5%	100.0%

Table B- 1b. Results Over All Sessions by Competency

All Sessions Competency		Final Decision			Total
		Above Grade	At Grade	Other	
ASCAC	Count	15	14	2	31
	% of Total	5.3%	4.9%	0.7%	11.0%
AAAC	Count	35	28	2	65
	% of Total	12.4%	9.9%	0.7%	23.0%
SMC	Count	31	23	1	55
	% of Total	11.0%	8.1%	0.4%	19.4%
AIRSC	Count	35	21	3	59
	% of Total	12.4%	7.4%	1.1%	20.8%
AtSC	Count	14	18	0	32
	% of Total	4.9%	6.4%	0.0%	11.3%
SEC	Count	26	13	2	41
	% of Total	9.2%	4.6%	0.7%	14.5%
Total	Count	156	117	10	283
	% of Total	55.1%	41.3%	3.5%	100.0%

Table B- 2a. Results for Session 1 by Peer Group

Session 1 Peer Group		Final Decision			Total
		Above Grade	At Grade	Other	
Aero & Acoustics	Count	7	4	0	11
	% of Total	10.6%	6.1%	0.0%	16.7%
Aerospace Sys	Count	5	4	0	9
	% of Total	7.6%	6.1%	0.0%	13.6%
Atmospheric Science	Count	5	5	0	10
	% of Total	7.6%	7.6%	0.0%	15.2%
Computional Methods	Count	4	3	0	7
	% of Total	6.1%	4.5%	0.0%	10.6%
Dynamics & Ctrls	Count	5	2	1	8
	% of Total	7.6%	3.0%	1.5%	12.1%
Flight Instrumentation	Count	2	0	0	2
	% of Total	3.0%	0.0%	0.0%	3.0%
Research Systems	Count	4	2	0	6
	% of Total	6.1%	3.0%	0.0%	9.1%
Sensors, Instrum & Meas	Count	1	3	0	4
	% of Total	1.5%	4.5%	0.0%	6.1%
Structures & Mtls	Count	3	6	0	9
	% of Total	4.5%	9.1%	0.0%	13.6%
Total	Count	36	29	1	66
	% of Total	54.5%	43.9%	1.5%	100.0%

Table B- 2b. Results for Session 1 by Competency

Session 1 Competency		Final Decision			Total
		Above Grade	At Grade	Other	
ASCAC	Count	5	6	0	11
	% of Total	7.6%	9.1%	0.0%	16.7%
AAAC	Count	9	4	0	13
	% of Total	13.6%	6.1%	0.0%	19.7%
SMC	Count	7	10	1	18
	% of Total	10.6%	15.2%	1.5%	27.3%
AIRSC	Count	6	3	0	9
	% of Total	9.1%	4.5%	0.0%	13.6%
AtSC	Count	5	5	0	10
	% of Total	7.6%	7.6%	0.0%	15.2%
SEC	Count	4	1	0	5
	% of Total	6.1%	1.5%	0.0%	7.6%
Total	Count	36	29	1	66
	% of Total	54.5%	43.9%	1.5%	100.0%

Table B- 3a. Results for Session 2 by Peer Group

Session 2 Peer Group		Final Decision			Total
		Above Grade	At Grade	Other	
Aero & Acoustics	Count	2	6	0	8
	% of Total	2.4%	7.1%	0.0%	9.5%
Aerothermo	Count	9	1	0	10
	% of Total	10.7%	1.2%	0.0%	11.9%
Atmospheric Science	Count	7	3	0	10
	% of Total	8.3%	3.6%	0.0%	11.9%
Computer Sci	Count	2	2	0	4
	% of Total	2.4%	2.4%	0.0%	4.8%
Crew Systems	Count	6	4	0	10
	% of Total	7.1%	4.8%	0.0%	11.9%
Dynamics & Ctrls	Count	6	3	0	9
	% of Total	7.1%	3.6%	0.0%	10.7%
Flight Instrumentation	Count	4	5	0	9
	% of Total	4.8%	6.0%	0.0%	10.7%
Research Systems	Count	4	10	1	15
	% of Total	4.8%	11.9%	1.2%	17.9%
Sensors, Instrum & Meas	Count	3	5	1	9
	% of Total	3.6%	6.0%	1.2%	10.7%
Total	Count	43	39	2	84
	% of Total	51.2%	46.4%	2.4%	100.0%

Table B- 3b. Results for Session 2 by Competency

Session 2 Competency		Final Decision			Total
		Above Grade	At Grade	Other	
ASCAC	Count	0	0	0	0
	% of Total	0.0%	0.0%	0.0%	0.0%
AAAC	Count	14	10	1	25
	% of Total	16.7%	11.9%	1.2%	29.8%
SMC	Count	3	3	0	6
	% of Total	3.6%	3.6%	0.0%	7.1%
AIRSC	Count	12	12	0	24
	% of Total	14.3%	14.3%	0.0%	28.6%
AtSC	Count	6	4	0	10
	% of Total	7.1%	4.8%	0.0%	11.9%
SEC	Count	8	10	1	19
	% of Total	9.5%	11.9%	1.2%	22.6%
Total	Count	43	39	2	84
	% of Total	51.2%	46.4%	2.4%	100.0%

Table B- 4a. Results for Session 3 by Peer Group

Session 3 Peer Group		Final Decision			Total
		Above Grade	At Grade	Other	
Aero & Acoustics	Count	2	5	0	7
	% of Total	2.4%	6.0%	0.0%	8.3%
Aerospace Sys	Count	5	6	0	11
	% of Total	6.0%	7.1%	0.0%	13.1%
Atmospheric Science	Count	3	6	0	9
	% of Total	3.6%	7.1%	0.0%	10.7%
Computational Methods	Count	5	5	0	10
	% of Total	6.0%	6.0%	0.0%	11.9%
Crew Systems	Count	7	1	1	9
	% of Total	8.3%	1.2%	1.2%	10.7%
Dynamics & Ctrls	Count	7	4	0	11
	% of Total	8.3%	4.8%	0.0%	13.1%
Flight Instrumentation	Count	5	0	0	5
	% of Total	6.0%	0.0%	0.0%	6.0%
Research Systems	Count	7	1	1	9
	% of Total	8.3%	1.2%	1.2%	10.7%
Sensors, Instrum & Meas	Count	1	2	0	3
	% of Total	1.2%	2.4%	0.0%	3.6%
Structures & Mtls	Count	6	4	0	10
	% of Total	7.1%	4.8%	0.0%	11.9%
Total	Count	48	34	2	84
	% of Total	57.1%	40.5%	2.4%	100.0%

Table B- 4b. Results for Session 3 by Competency

Session 3 Competency		Final Decision			Total
		Above Grade	At Grade	Other	
ASCAC	Count	6	5	0	11
	% of Total	7.1%	6.0%	0.0%	13.1%
AAAC	Count	5	10	0	15
	% of Total	6.0%	11.9%	0.0%	17.9%
SMC	Count	13	7	0	20
	% of Total	15.5%	8.3%	0.0%	23.8%
AIRSC	Count	14	5	1	20
	% of Total	16.7%	6.0%	1.2%	23.8%
AtSC	Count	2	6	0	8
	% of Total	2.4%	7.1%	0.0%	9.5%
SEC	Count	8	1	1	10
	% of Total	9.5%	1.2%	1.2%	11.9%
Total	Count	48	34	2	84
	% of Total	57.1%	40.5%	2.4%	100.0%

Table B- 5a. Results for Session 4 by Peer Group

Session 4 Peer Group		Final Decision: Above Grade	At Grade	Other	Total
Aero & Acoustics	Count	3	2	1	6
	% of Total	6.4%	4.3%	2.1%	12.8%
Aerospace Sys	Count	1	3	1	5
	% of Total	2.1%	6.4%	2.1%	10.6%
Atmospheric Science	Count	1	4	0	5
	% of Total	2.1%	8.5%	0.0%	10.6%
Computer Sci	Count	6	1	1	8
	% of Total	12.8%	2.1%	2.1%	17.0%
Flight Instrumentation	Count	2	2	1	5
	% of Total	4.3%	4.3%	2.1%	10.6%
Research Systems	Count	7	0	0	7
	% of Total	14.9%	0.0%	0.0%	14.9%
Sensors, Instrum & Meas	Count	2	1	0	3
	% of Total	4.3%	2.1%	0.0%	6.4%
Structures & Mtls	Count	6	2	0	8
	% of Total	12.8%	4.3%	0.0%	17.0%
Total	Count	28	15	4	47
	% of Total	59.6%	31.9%	8.5%	100.0%

Table B- 5b. Results for Session 4 by Competency

Session 4 Competency		Final Decision: Above Grade	At Grade	Other	Total
ASCAC	Count	4	3	2	9
	% of Total	8.5%	6.4%	4.3%	19.1%
AAAC	Count	7	4	1	12
	% of Total	14.9%	8.5%	2.1%	25.5%
SMC	Count	7	3	0	10
	% of Total	14.9%	6.4%	0.0%	21.3%
AIRSC	Count	3	1	1	5
	% of Total	6.4%	2.1%	2.1%	10.6%
AtSC	Count	1	3	0	4
	% of Total	2.1%	6.4%	0.0%	8.5%
SEC	Count	6	1	0	7
	% of Total	12.8%	2.1%	0.0%	14.9%
Total	Count	28	15	4	47
	% of Total	59.6%	31.9%	8.5%	100.0%

APPENDIX C – Survey Issued after Each RDCP Session

Research and Development Classification Process Questionnaire

In order to improve the Research and Development Classification Process, feedback from all the participants is critical, whether you are a reviewee, a panel member, or a Branch Head. The survey below was designed to gather that feedback yet be quick and easy to do. While your participation in this survey is completely voluntary, your response would help form a more accurate picture of how the RDCP is progressing. Your responses are completely anonymous. The data will be analyzed and presented as representative of the entire sample, such as ranges, averages, variances, and percentages. This survey will close (date that is three weeks after survey announcement inserted here) at 5:00pm. The results, but not the data, of the survey will be made available to all RDCP participants and will be posted on the RDCP website: http://ohr.larc.nasa.gov/RDCP.html. This survey, or one similar to it, will be repeated for each session.

Please respond to all items by clicking on the appropriate answer or by typing in the information requested.

Thank you for your help in improving the RDCP!

1. Please indicate which Guide you used for the RDCP.
    1. Research Grade Evaluation Guide or EDGEG Part 3
    2. Equipment Development Guide (any part)

2. Please estimate the amount of time, in hours, you spent working on RDCP.

3. Please indicate your participant role
    1. Branch Head/Supervisor
    2. Panel member
    3. Reviewee

The following statements (items 5-16) should be rated according to how each applies to your personal situation or experience. Please rate each statement from 1 to 5 and provide any comments to explain your answer or to make suggestions in item 18. Scale (0 = no opinion or don't know, 1 =Strongly Disagree, 2 =Disagree, 3= Neither Disagree nor Agree, 4 =Agree, 5 =Strongly Agree)

5. The RDCP reviewee selection method is fair to most RDCP AST researchers and developers.

6. Your RDCP training was adequate.

7. The RDCP Handbook was adequate.

APPENDIX C – Survey Issued after Each RDCP Session, continued

8. The RDCP process is understandable.

9. The RDCP process provides clear criteria for classification of job duties.

10. The RDCP process is conducted consistently across all researchers, to your knowledge.

11. The RDCP process is an improvement over the old classification process.

12. The RDCP process is an improvement over the old promotion process

13. Your morale has increased due to implementation of the RDCP process.

14. You were allowed by your supervisor adequate time to work on the RDCP.

15. You agree with the panel's decision(s) (regardless of role)

16. The panel evaluation report was adequate to explain the scores received.

17. If you were a **reviewee**, please indicate the category for your panel's decision
    1. Above Grade your current grade
    2. At Grade your current grade
    3. Below Grade your current grade
    4. Other

18. Please provide any general comments or explanations of your responses here.